Title: RESONANT RESPONSE MATCHING CIRCUIT FOR HEARING AID

# **REMARKS**

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This responds to the Office Action mailed on October 27, 2003 and the Advisory Action mailed on 29 January 2004.

Claims 1 and 5-20 are amended, no claims are canceled, and no claims are added; as a result, claims 1-20 are now pending in this application. The amendments to the claims are fully supported by the specification as originally filed. No new matter is introduced. Applicant respectfully requests reconsideration of the above-identified application in view of the amendments above and the remarks that follow.

Claims 1, 5, 6, 8-11, 13-16, 19, and 20 find support in the specification, for example, on page 9, line 11 - page 10, line 8 and Figure 4.

Claims 1, 8, 14, 18 find additional support in the specification, for example, on page 8, lines 10-11.

Claims 7, 12, and 17 are amended to provide language in line with the independent claims from which they depend.

## First \$103 Rejection of the Claims

Claims 1, 6, 11, and 16 were rejected under 35 USC § 103(a) as being unpatentable over Ribic (U.S. Patent No. 5,263,089) in view of Sogn et al. (U.S. Patent No. 5,243,662) and Northeved et al. (U.S. Patent No. 5,044,373). Applicant traverses these grounds for rejection for at least the reasons provided in the response mailed 27 January 2003. However, to expedite the patent process, Applicant amends independent claims 1, 6, 11, and 16.

As amended, claim 1 recites "An electronic device for use in assisting a hearing impaired patient ..., the electronic device comprising ... active low pass filter including: a resistor coupled to a capacitor to form a low pass filter to provide a filtered signal; an operational amplifier to receive the filtered signal at an input of the operational amplifier." Ribic recites in column 1, lines 56-63: "Multiple filters with biquadratic structure are known in the literature, for example from "RC Active Filter Desing Handbook", J. Wiley & Sons, 1985. However, these filters are always designed with operational amplifiers. Such a filter design, however, is not suitable for use in hearing aids, as it is not possible due to limitations in the available space to build in, in addition to the usual amplifier components"

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Applicant respectfully submits that Ribic teaches way from claim 1 as amended. A factor cutting against a finding of motivation to combine or modify the prior art is when the prior art teaches away from the claimed combination. A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path the applicant took. In re Gurley, 27 F.3d 551, 31 USPQ 2d 1130, 1131 (Fed. Cir. 1994); United States v. Adams, 383 U.S. 39, 52, 148 USPQ 479, 484 (1966); In re Sponnoble, 405 F.2d 578, 587, 160 USPQ 237, 244 (C.C.P.A. 1969); In re Caldwell, 319 F.2d 254, 256, 138 USPQ 243, 245 (C.C.P.A. 1963). Thus, Applicant submits that the combination of Ribic, Sogn et al. (hereafter Sogn), and Northeved et al. (hereafter Northeved) does not establish a proper prima facie case of obviousness with respect to claim 1.

In addition, Applicant submits that Ribic teaches away form independent claims 6, 11, and 16 as amended. Thus, Applicant submits that the combination of Ribic, Sogn, and Northeved does not establish a proper prima facie case of obviousness with respect to claims 6, 11, and 16.

Further, Applicant cannot find in the combination of Ribic, Sogn, and Northeved a teaching or suggestion of an active low pass filter having an operational amplifier configured as arranged in amended claim 1, as arranged in amended claim 6, or as arranged in amended claim 16. Thus, Applicant submits that claims 1, 6, and 16 are patentable over Ribic in view of Sogn and Northeved.

Applicant cannot find in the combination of Ribic, Sogn, and Northeved a teaching or suggestion of a method including tuning a frequency response curve of an electronic hearing aid, where tuning includes adjusting a variable resistor coupled to an operational amplifier of an active low pass filter in the electronic hearing aid as recited in claim 11. Thus, Applicant submits that claim 11 is patentable over Ribic in view of Sogn and Northeved.

Applicant respectfully requests withdrawal of these rejections of claims 1, 6, 11, and 16, and reconsideration and allowance of these claims.

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### Second \$103 Rejection of the Claims

Claims 2-5, 7-10, 12-15, and 17-20 were rejected under 35 USC § 103(a) as being unpatentable over Ribic (U.S. Patent No. 5,263,089) in view of Sogn et al. (U.S. Patent No. 5,243,662) and Northeved et al. (U.S. Patent No. 5,044,373) as applied to claims 1, 6, and 16 above, and further in view of Killion (U.S. Patent No. 4,689,819). Applicant traverses these grounds for rejection.

Applicant submits that the combination of Killion with Ribic in view of Sogn and Northeved does not cure the deficiencies of applying Ribic in view of Sogn and Northeved to claims 1, 6, 11, and 16, as amended. Therefore, Applicant submits that claims 1, 6, 11, and 16 are patentable over Ribic in view of Sogn and Northeved and further in view of Killion.

Claims 2-5, claims 7-10, claims 12-15, and claims 17-20 depend on claims 1, 6, 11, and 16, respectively, and are patentable over Ribic in view of Sogn and Northeved and further in view of Killion for at least the reasons stated above and additionally in further view of the elements of these dependent claims.

Applicant respectfully requests withdrawal of these rejections of claims 2-5, 7-10, 12-15, and 17-20, and reconsideration and allowance of these claims.

AND NOMENT AND RESPONSE UNDER 37 CFR § 1.116 – EXPEDITED PROCEDURE State Number: 09/251592

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# **CONCLUSION**

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612) 371-2157 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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By their Representatives,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop RCE, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this day of August, 2004.

Name

Signature